CLAIMS

I/We claim:

[c1] 1. An apparatus for treating a neural function in a brain of a patient, comprising:

an electrode array having an electrical contact configured to deliver electrical stimulation to the brain; and

an implantable stimulus unit having a pulse generator for outputting electrical stimulation signals to the electrode array and a controller coupled to the pulse generator, wherein the controller includes a limiting module having a preset therapy period during which a plurality of discrete therapy sessions are to be performed for recovering a functional ability corresponding to the neural function, and wherein the limiting module is configured to prevent the stimulation signals from being provided to the electrode array after expiration of the therapy period.

[c2] 2. The apparatus of claim 1 wherein the pulse generator includes circuitry that biases the electrical contact of the electrode array at a single polarity.

[c3] 3. The apparatus of claim 1 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a therapy period selected from one of the group of not more than (a) one year, (b) three months, (c) one month, and (d) one week.

[c4] 4. The apparatus of claim 1 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a limited number of therapy sessions.

[c5] 5. The apparatus of claim 1 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a limited accumulated time of actual stimulation.

[c6] 6. The apparatus of claim 1 wherein the limiting module comprises a hardware or software switch activated by the controller.

[c7] 7. The apparatus of claim 1 wherein the limiting module is a computer operable medium containing instructions that cause the controller to deactivate the pulse generator at the expiration of the therapy period.

[c8] 8. The apparatus of claim 1 wherein the limiting module comprises a switch between the pulse generator and the electrode array, and the switch is activated by the controller to electrically disconnect the electrode array from the pulse generator.

[c9] 9. The apparatus of claim 1 wherein the limiting module comprises a switch coupled to the pulse generator and a power supply, and the switch is activated by the controller to disconnect the power supply from the pulse generator.

[c10] 10. An apparatus for treating a neural function in a brain of a patient, comprising:

an electrode array having a support member configured to be implanted under the scalp of the patient and a plurality of electrical contacts carried by the support member; and

an implantable stimulus unit having a signal generator that outputs electrical stimulation signals to the electrode array and a limiting module that prevents the electrical stimulation signals from being provided to the electrode array after expiration of a therapy period

for recovering functional ability corresponding to the impaired neural function.

[c11] 11. The apparatus of claim 10 wherein the signal generator includes circuitry that biases the plurality of electrical contacts carried by the support member at a single polarity.

[c12] 12. The apparatus of claim 10 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a therapy period of not more than (a) one year, (b) three months, (c) one month, or (d) one week.

[c13] 13. The apparatus of claim 10 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a limited number of therapy sessions.

[c14] 14. The apparatus of claim 10 wherein the limiting module is configured to prevent the electrical stimulation from being provided to the electrode array after a limited accumulated time of actual stimulation.

[c15] 15. The apparatus of claim 10 wherein (a) the stimulus unit further comprises a controller, and (b) the limiting module comprises a switch controlled by the controller.

[c16] 16. The apparatus of claim 10 wherein the limiting module comprises a switch activated by a transponder external with respect to the patient.

[c17] 17. The apparatus of claim 10 wherein (a) the stimulus unit further comprises a controller, and (b) the limiting module is a computer operable medium containing instructions that cause the controller to deactivate the signal generator.

[c18] 18. The apparatus of claim 17 wherein the computer operable medium is hardware and/or software.

[c19] 19. The apparatus of claim 10 wherein (a) the stimulus unit further comprises a controller, (b) the limiting module comprises a switch between the signal generator and the electrode array, and (c) the switch is activated by the controller to electrically disconnect the electrode array from the signal generator.

[c20] 20. The apparatus of claim 10 wherein (a) the stimulus unit further comprises a controller, (b) the limiting module comprises a switch coupled to the signal generator and a power supply, and (c) the switch is activated by the controller to disconnect the power supply from the signal generator.

[c21] 21. A method for treating a neural function in a brain of a patient, the method comprising:

determining a therapy period during which at least one therapy session is to be performed to recover and/or develop a functional ability corresponding to the neural function;

identifying a stimulation site in and/or on the brain of the patient associated with the neural function;

positioning an electrode at least proximate to the identified stimulation site;

providing at least one electrical stimulation treatment to the stimulation site by delivering electrical stimulation signals to the electrode during the therapy session; and

preventing the electrical stimulation signals from being delivered to the stimulation site after expiration of the therapy period.

[c22] 22. The method of claim 21 wherein determining the therapy period comprises setting a limiting module to terminate stimulation after a period from approximately one day to not more than one year.

[c23] 23. The method of claim 21 wherein determining the therapy period comprises setting a limiting module to terminate stimulation after a period from approximately one day to not more than one month.

[c24] 24. The method of claim 21 wherein determining the therapy period comprises setting a limiting module to terminate stimulation after a period from approximately one day to not more than one week.

[c25] 25. The method of claim 21 wherein preventing the electrical stimulation signals from being delivered to the stimulation site comprises setting the limiting module to terminate stimulation after a predetermined number of therapy sessions.

[c26] 26. A method for stimulating neurons in a brain of a patient using an implanted electrode assembly having a contact positioned at least proximate to the cortex of the patient and an implanted signal generator electrically coupled to the contact, the method comprising:

performing an electrical stimulation session by generating an electrical stimulation waveform with the signal generator to apply an electrical current to the contact at a stimulation site proximate to a surface layer of the cortex;

repeating the electrical stimulation session at intervals throughout a therapy period; and

preventing the electrical stimulation from being delivered to the contact upon expiration of the therapy period.

[c27] 27. The method of claim 26, further comprising monitoring a characteristic of the patient influenced by the electrical stimulation, and determining whether the characteristic has maintained a desired level after a period of non-stimulation following preventing the electrical stimulation from being delivered to the contact.

[c28] 28. The method of claim 27, further comprising restarting the electrical stimulation sessions when the characteristic has regressed after the period of non-stimulation.